

0/12/99

K984221

**SIEMENS**

**510 (k) Summary**

This summary of 510(k), safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

**I. General Information.**

**Establishment:**

- Address: Siemens Medical Systems, Inc.  
186 Wood Avenue South  
Iselin, N.J. 08830

**Registration Number:** 2240869

Contact Person: Ms. Kathleen Rutherford  
Manager, Regulatory Submissions  
Telephone: (732) 321-4779  
FAX: (732) 321-4841

**Date of Summary Preparation:** 4/18/97

**Device Name:**

Trade Name: BOLD MRI Package for MAGNETOM VISION and MAGNETOM  
SYMPHONY MR Systems

- Systems Classification Name: Magnetic Resonance Diagnostic  
Device, CFR □ 892.1000

Classification : Class II

Performance Standards : None established under Section 514 the Food, Drug,  
and Cosmetic Act.



## **II. Safety and Effectiveness Information Supporting Substantial Equivalence.**

### **• Device Description:**

The BOLD MRI Package is an postprocessing option for the MAGNETOM VISION and MAGNETOM SYMPHONY Systems

### **• Intended Use**

The BOLD MRI Package for MAGNETOM VISION and SYMPHONY MR systems, provides dedicated acquisition and reconstruction techniques which offer the possibility of visualization of small susceptibility changes, due to increased levels of oxygen, by parametric images. The parametric images provide parameter information, instead of anatomical information. These parametric images can be overlaid on the anatomical images to optimize the presentation of information to support the diagnostic process. These BOLD images when interpreted by a trained physician, yield information that may assist in diagnosis.

### **• Technological Characteristics**

The magnet, RF system, and gradient system, of the MAGNETOM VISION and MAGNETOM SYMPHONY configured with the BOLD MRI Package is substantially equivalent to the standard MAGNETOM VISION and MAGNETOM SYMPHONY systems.

### **• General Safety and Effectiveness Concerns:**

Operation of the MAGNETOM VISION and MAGNETOM SYMPHONY with the BOLD MRI Package is substantially equivalent to standard operation of the MAGNETOM VISION and MAGNETOM SYMPHONY systems. The following MR safety and performance parameters are unaffected by the modification:

#### **[Safety]**

- Maximum Static Field
- Rate of Change of Magnetic Field
- RF Power Deposition
- Acoustic Noise Levels
- Specification Volume

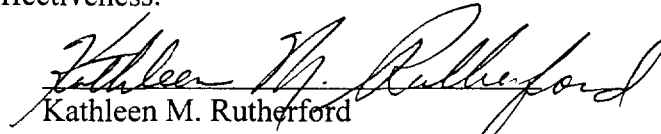
#### **[Performance]**

- Signal to Noise
- Image Uniformity
- Geometric Distortion
- Slice Profile, Thickness and Gap
- High Contrast Spatial Resolution

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- **Substantial Equivalence:**

Laboratory and clinical testing were performed to support this claim of substantial equivalence and to show that the technological differences do not raise any new questions pertaining to safety and effectiveness.

  
Kathleen M. Rutherford  
Manager, Regulatory Submissions

1/19/99  
Date



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

FEB 12 1999

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

Kathleen Rutherford  
Manager, Regulatory Submissions  
Siemens Medical Systems, Inc.  
186 Wood Avenue South  
Iselin, NJ 08830

Re: K984221  
BOLD MRI Package for MAGNETOM VISION AND  
MAGNETOM SYMPHONY MR SYSTEMS  
Dated: November 24, 1998  
Received: November 25, 1998  
Regulatory class: II  
21 CFR 892.1000/Procode: 90 LNH

Dear Ms. Rutherford:

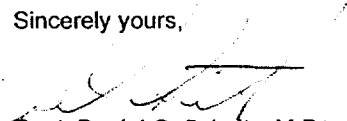
We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4613. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597, or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

  
Capt. Daniel G. Schultz, M.D.  
Acting Director, Division of Reproductive,  
Abdominal, Ear, Nose and Throat,  
and Radiological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

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510(k) Number (if known) K984221

Device Name: **BOLD MRI Package for MAGNETOM VISION and SYMPHONY MR**

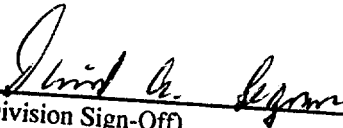
## Indications for Use:

The BOLD MRI Package for MAGNETOM VISION and SYMPHONY MR systems, provides dedicated acquisition and reconstruction techniques which offer the possibility of visualization of small susceptibility changes, due to increased levels of oxygen, by parametric images. The parametric images provide parameter information, instead of anatomical information. These parametric images can be overlaid on the anatomical images to optimize the presentation of information to support the diagnostic process. These BOLD images when interpreted by a trained physician, yield information that may assist in diagnosis.

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Concurrence of CDRH, Office of Device Evaluation

Prescription Use ☒ OR Over-The-Counter Use ☐

  
(Division Sign-Off)  
Division of Reproductive, Abdominal, ENT,  
and Radiological Devices  
510(k) Number K984221